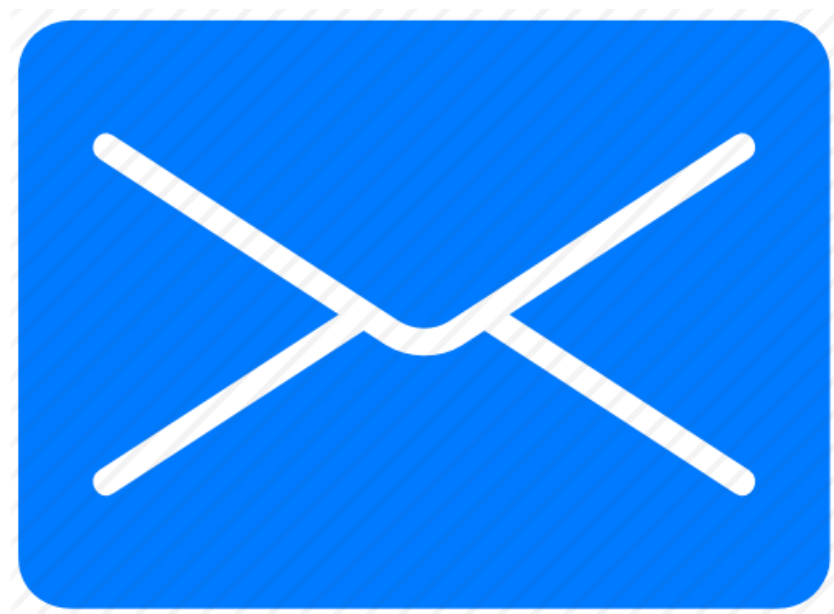


CSE 2200 PROJECT



K-Mail

A platform where kuetian get connected through email

23.06.2021

SAIMOON AL FARSHI OMAN

Roll: **1807018**

Department: Computer Science and Engineering

Khulna University Of Engineering & Technology

Objectives:

1. To make an application that will connect kuetian through email
2. To make an application that will let a user send email with or without picture to a user or many users at a time
3. To make an application that will let a user forward an email to a user or many users at a time with same content or edited content
4. To make an application that will let a user download image from email to his/her computer
5. To make an application that will show inbox and sent mails messages in descending order of time and also show seen or unseen flag for a message

Introduction:

The purpose of this project is to make an application that will connect kuetians through email. Using this application a kuetian can easily send emails to another kuetian. Each kuetian will have one account only. And from this idea the name of the project was set “K-Mail”.

The application, at present, lets a user to send email to a user or many users with or without image. One can also download attached image with an email. Mysql has been used as the real time database. Also there is a feature that will let a user know if an email is seen or not. And those emails are sorted in descending order of time means latest emails will show up. A

user can also delete his/her inbox emails. Also a user can forward his/her inbox emails.

Implementation:

Details description:

The application starts with a main scene. The main scene contains a textbox for email and a box for password. There are three buttons on this scene. One for log in, one for sign up and another for reset password. If someone try to log in with wrong information or some empty field error message will pop up and a blue dot will arrive beside that empty or wrong field. By giving correct information and pressing log in user will go to welcome scene.

In sign up scene a form is set for collecting details information about user. It contains 3 buttons. It contains name, department, id, security code, date of birth, gender, mobile, password, confirm password. Each field must fill up with correct information, if not then a pop up message will show with error message and a blue dot will pop beside that error field. Here security code which is provided from office and this code is stored in mysql database, so that one user couldn't open more than one account. If this code will match with the code stored in database then the user can processed. Mobile number field must contain digits and there are 11 digits it should

contain. And password field contain atleast one uppercase, one lowercase alphabet, one digit and a character that is neither alphabet nor digit. And password should contain atleast 6 character. If all information is correct, by pressing submit button we can a user can sign up and a successful pop up message will show and went to welcome scene. Other two buttons will shift from sign up to log in scene.

In log in scene by pressing reset password button user will shift to account recovery scene. By putting correct id and security code combination user can reset his password. If wrong combination is found a error message will pop up and blue dot will also pop up beside the field. There are two button back and next. Back button for main scene and next is for reset password scene. In reset password scene one can set a new password and confirm that. Password must contain atleast 6 character. Atleast one uppercase, one lowercase alphabet, one digit and a character which is neither digit nor alphabet. By reset his/her account password the scene will change to main scene and using new password he/she can log in and go to welcome page.

Welcome scene is mainly divided into two part. In one part there is a welcome text with user name and his/her accounts email address. And other part

contains some buttons for compose, inbox, sent mails, edit information and log out. These button will change scene from welcome scene to a new scene.

In compose scene one user can send an email to another user with or without an image. Image will be taken from local pc. If receiver email is not given then an error message will pop up. There is another button to remove image. In send to many option a table will be found showing all registered email addresses. By using checkbox one can select receivers. After a successful email sent a pop up box will come up saying email sent successfully.

In inbox scene user can see his/her inbox messages and those messages will sort in descending order of time means least email will show in the beginning. If one email is selected or click the details of that email will show. From details of an email user can download the attached image in his/her computer. Also user can forward this email to many users. If forward button is pressed that email will forward to the compose scene. Then user can send that email. There is also a feature to check if a received email is seen or not. If it is not seen there will a black dot appear left side of that email. If seen that black dot will be vanished. There is a checkbox for each email to delete that email. If user select some of emails and press delete button a confirmation message will pop

up saying that “Are you sure to delete selected messages?”. If user press “Ok” those message will be deleted permanently. User can cancel deletion by pressing “Cancle”.

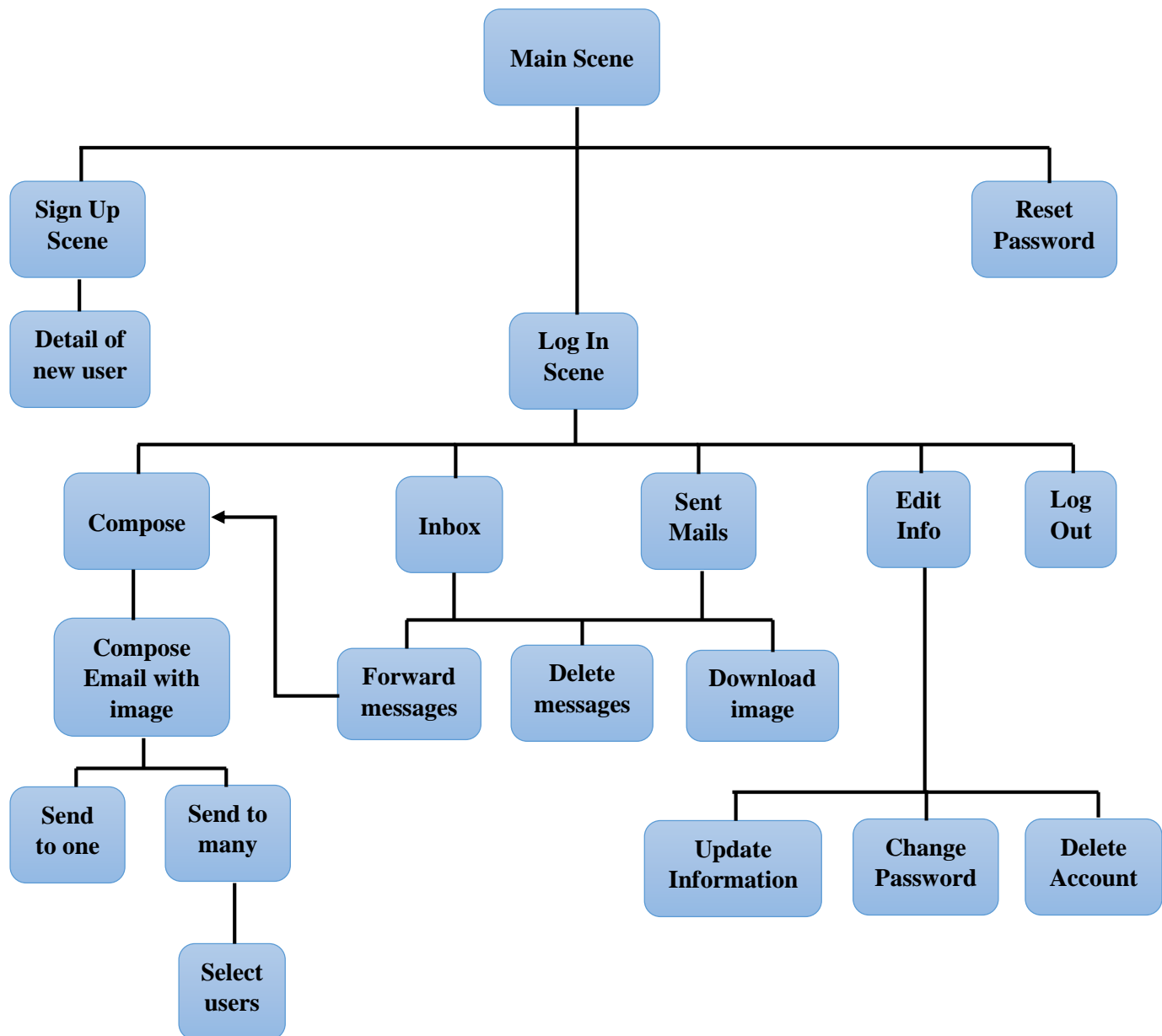
In Sent Mails scene user can see to whom he/she send emails and also the content, time of that email send. Also here user will have the feature same to inbox scene. User can download image, forward emails, delete emails etc. Same feature is applied in inbox and sent mails scene.

In edit info scene user can see his/her information details and update them. Updated data will store in mysql database and old data will be deleted. There is a button “See Details” to see the details of user and if he/she wants to edit them, he/she can edit here and then pressing “Update” user can update his/her details. User can also change his/her account password. For that user have to give his/her current password and new password he/she want to set. Password must have atleast 6 character, atleast one uppercase, one lowercase alphabet, one digit and one character that is neither alphabet nor digit. By setting new password user will go to welcome scene by default. If any information is wrong or empty a pop up message will show about the error also a blue dot appear beside the error or empty field. There is also an option for account deletion. All data associated

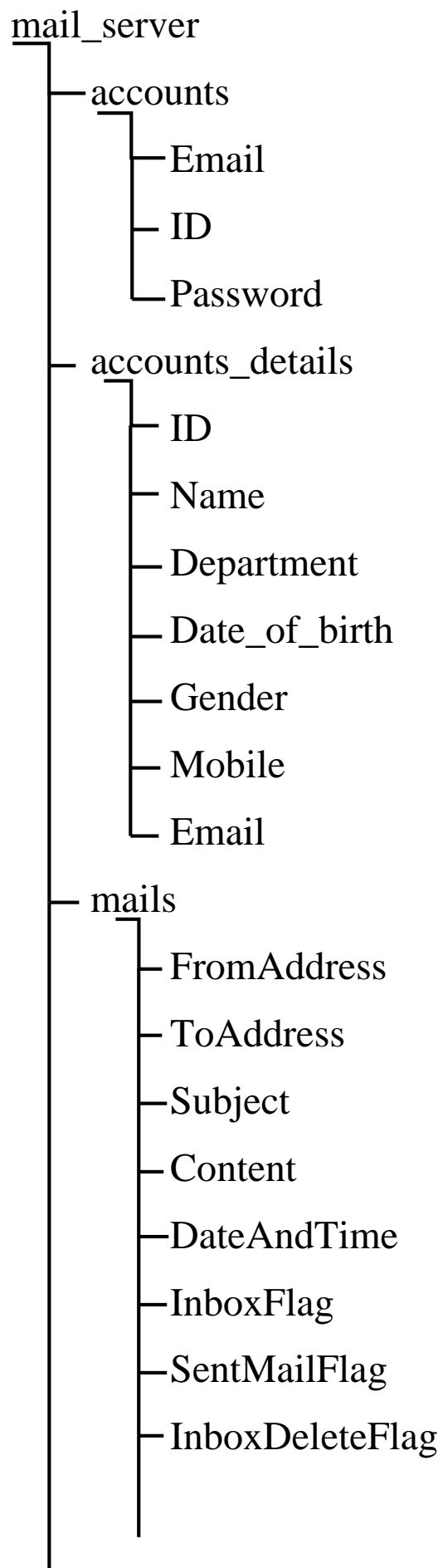
with user account will be deleted permanently. For deletion account user have to put his password. If the password is correct a confirmation message will pop up saying if user is sure to delete his/her account permanently. If user press “Ok” account will be deleted permanently and scene will change to main scene.

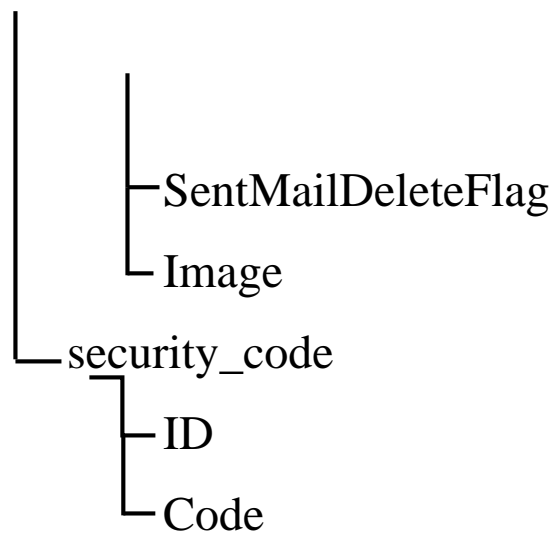
In welcome scene there is a button for log out from account. If user press “Log Out” a confirmation message will pop up and if user confirm to log out and press “Ok” he/she will log out from this application and a successful message will show. If he/she press “Cancel” log out process will be canceled.

Flow Chart:



Schema Diagram:





Details Visualization:

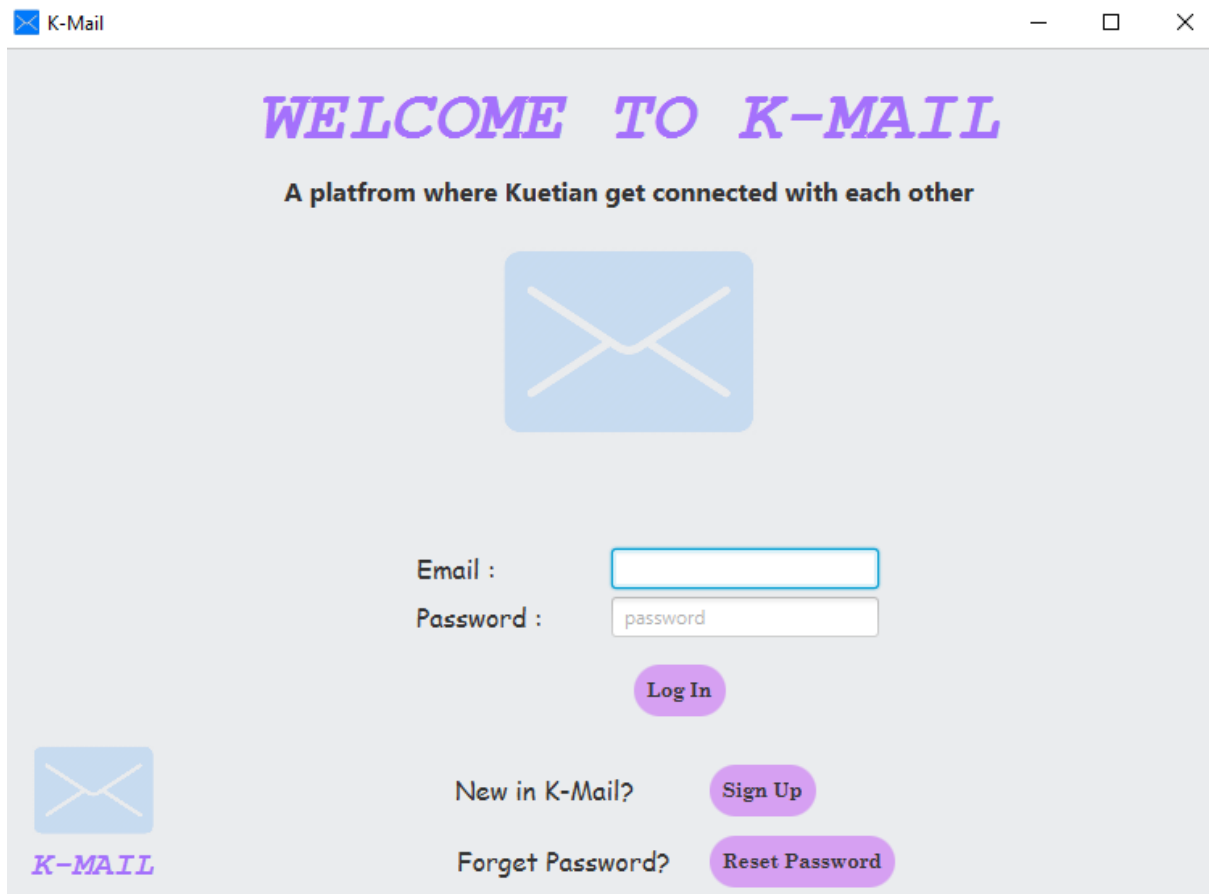


Fig 1.1: Main Scene



Fig 1.2: Welcome scene

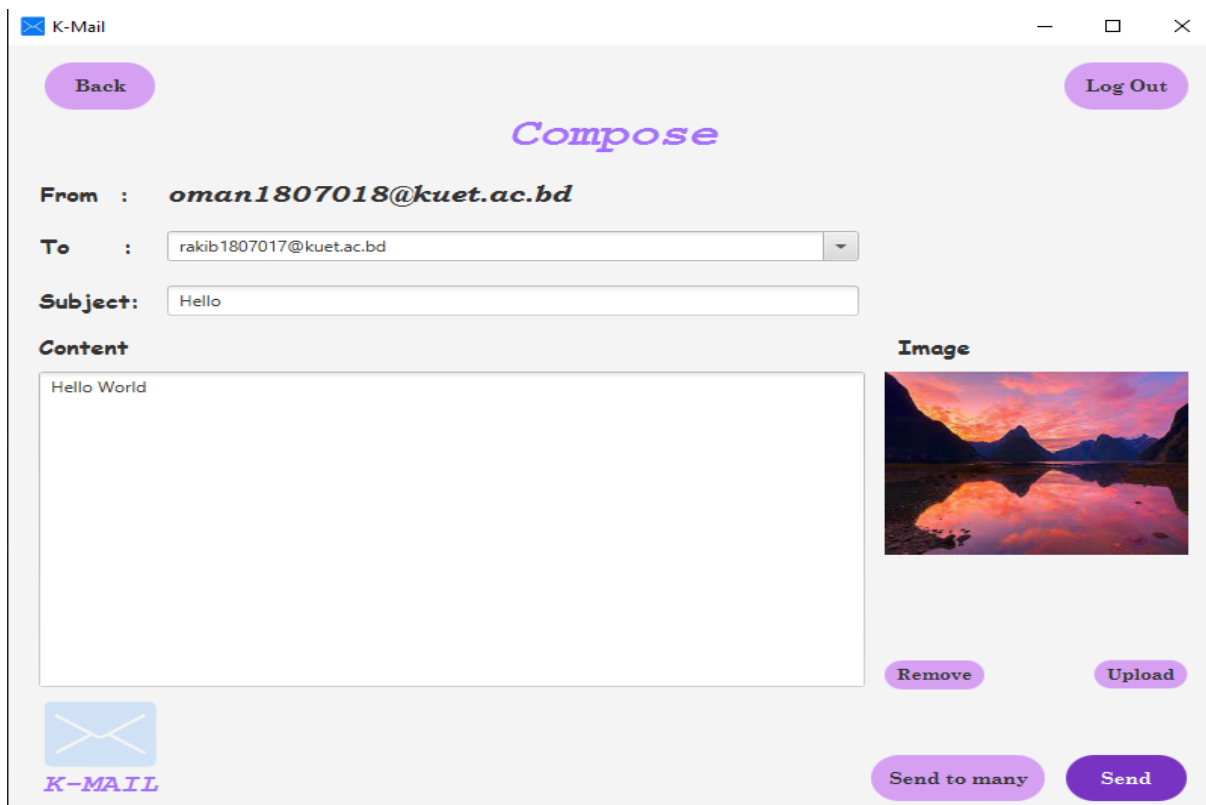


Fig 1.3: Compose Scene

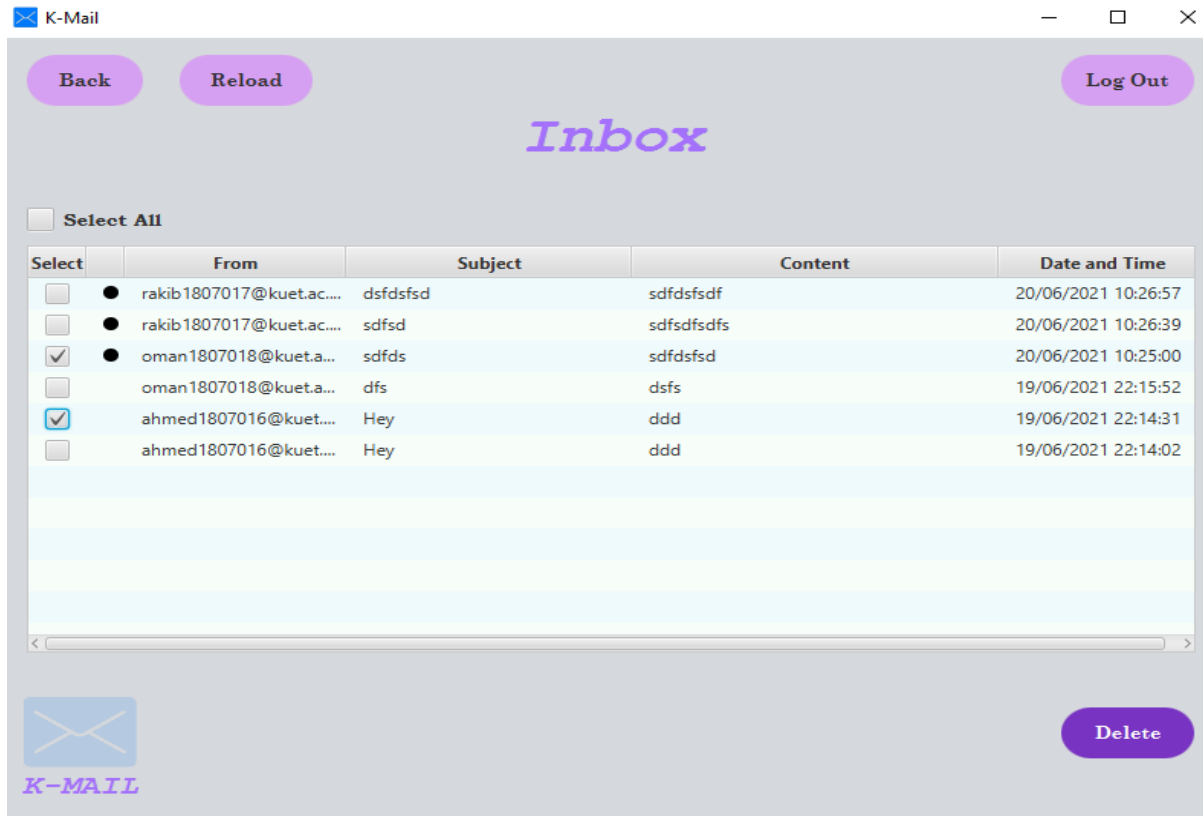


Fig 1.4: Inbox Scene

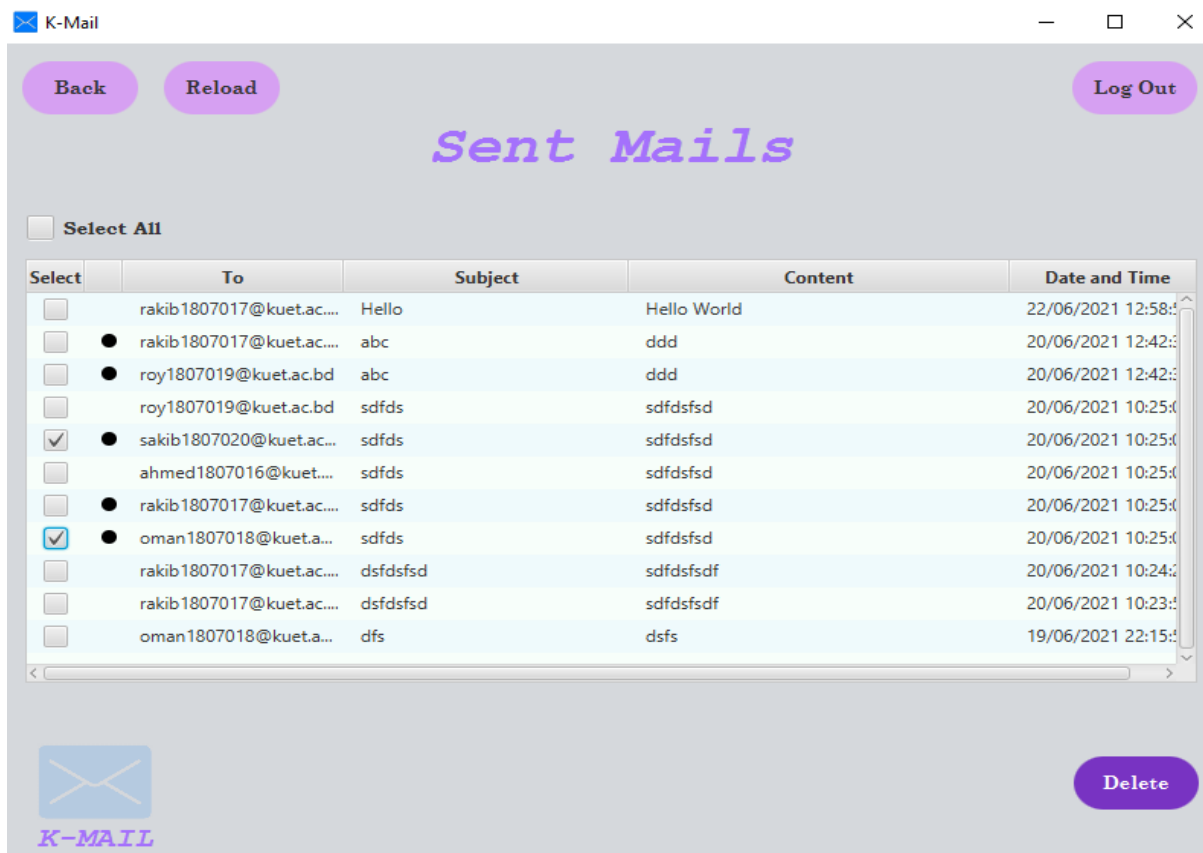


Fig 1.5: Sent Mails Scene



Fig 1.5: Email Details Scene

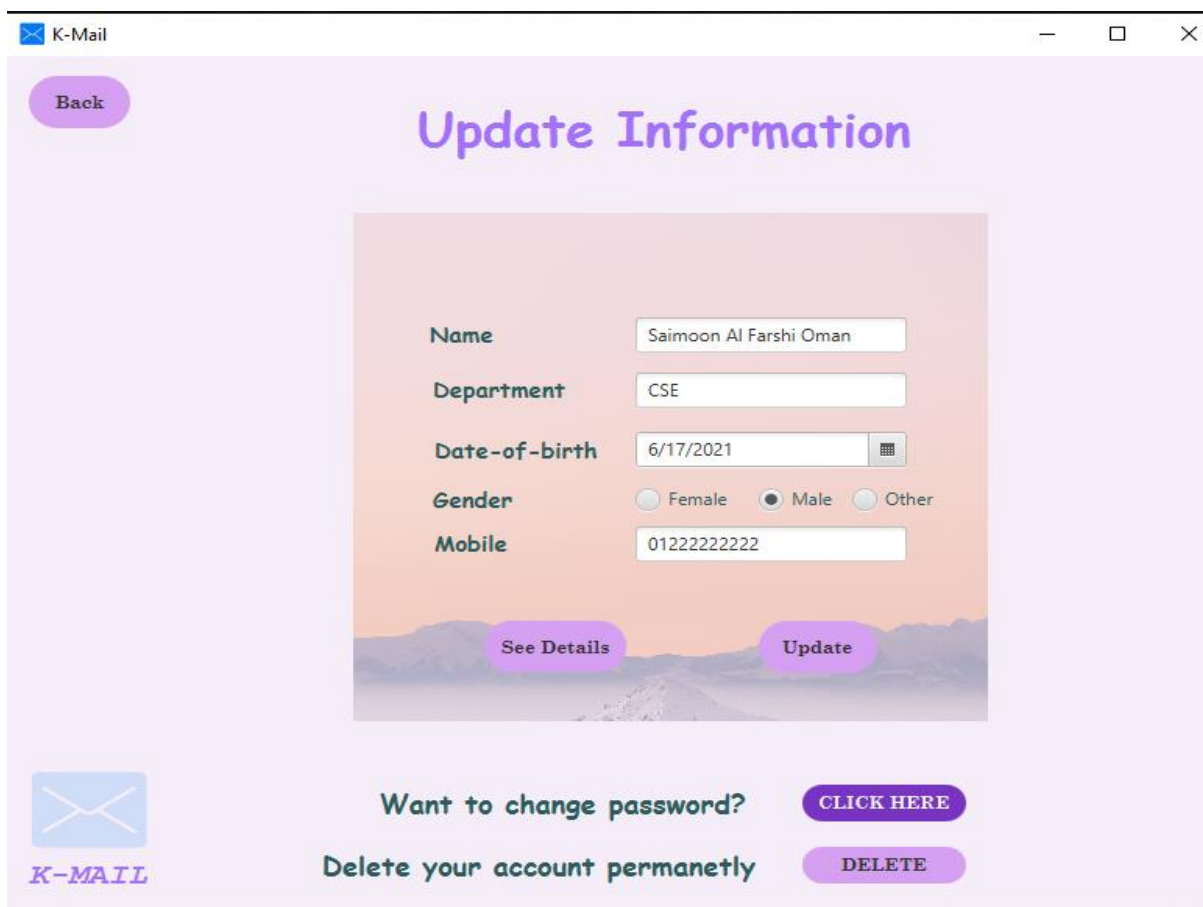


Fig 1.6: Edit Info Scene

K-Mail

Back

Sign Up

Plase fill the form

Name	<input type="text" value="Hasan khan"/>
Department	<input type="text" value="CSE"/>
ID	<input type="text" value="1807002"/>
Security Code	<input type="text" value="dfsd"/>
Date-of-birth	<input type="text" value="6/15/2021"/>
Gender	<input type="radio"/> Female <input checked="" type="radio"/> Male <input type="radio"/> Other
Mobile	<input type="text" value="01111"/>
Password	<input type="password" value="....."/>
Confirm Password	<input type="password" value="...."/>

Submit

Already has an account ? [Log In](#)


K-MAIL

Fig 1.7: Sign Up Scene

K-Mail

Back

Account Recovery



New Password

Confirm Password

Next

K-MAIL

Fig 1.8: Account Recovery Scene

Target vs Actual Accomplishments:

The target was to successfully create an email client application which will connect kuetians through email. This application is able to connect kuetians through email but failed to send attachment with email. This is one of the drawback of this application.

This application can send emails, receive emails, forward emails and all other thing email client applications does. Ignoring that drawback the application full fills all purpose.

Risks and Issues:

This application is using a real time database mysql. If this database crushed user data will be in danger because there is no backup system for that. All images are stored in database, which is not a good practice because of this database will become full soon. Normally images are stored in a cloud storage and fetch them form there in application. But for that php knowledge is needed. That's why this way is not applied.

This application worked well but sometimes some warning message showed in complied time. But this doesn't harm this application.

Discussion and Conclusion:

The project was completed successfully despite some difficulties. At first, the API was not running properly because of incompatible JDK version. The incompatibility issue was resolved by installing 32 bit JDK on the system. Another difficulty was faced when using TableView in java. The way of using TableView seems difficult to me. But later that problem was solved. Also difficulties faced while using image in this application. After understanding file and images in java that problem also solved. In the development period database was crashed once. Then new database was created to solve that issue.

As the program stores and retrieve data in database, working knowledge of database is required. To store and fetch data from database, knowledge about mysql database is required. JavaFx skills were also required. Even though many difficulties arose, it did not hinder the project's development. The project was done successfully resolving all the issues.

Practical Knowledge about developing application was achieved. The fundamentals of JavaFx and Java were strengthened.

References:

1. <https://www.javatpoint.com>
2. https://www.youtube.com/playlist?list=PLonJJ3BVjZW6_q8gh7XoLUIhRIyBcYJLP
3. https://www.youtube.com/watch?v=9XJicRt_FaI&t=6622s
4. <http://tutorials.jenkov.com/javafx/index.html>
5. <https://www.tutorialspoint.com/javafx/index.htm>
6. <https://docs.oracle.com/en/java/index.html>
7. <https://htmlcolorcodes.com> (for design)
8. <https://stackoverflow.com>